PERMITTING AND COMPLIANCE-RELATED QUESTIONS

How is Stericycle permitted?

Stericycle holds a Solid Waste Permit from the Division of Solid and Hazardous Waste and a Title V Operating permit from the Division of Air Quality. Copies of both permits are posted on the website.

When does the Title V permit for Stericycle expire?

Its renewal date is May 3, 2007. However, that is not necessarily the date the permit will expire. As long as Stericycle submits its application on time, the company can operate under the existing permit until the new permit is issued. The application is due on November 3, 2006.

Under a permit renewal, DAQ has no authority to apply new emission limits. The only changes that can be required deal with monitoring and record-keeping to verify compliance.

How can we keep informed on this?

Once the Division engineer reviews the permit and suggests any modifications, that draft permit is subject to a 30-day public comment period. Comment periods for permit renewals are advertised in the legal notices of the Salt Lake Tribune and Deseret News. Also, it will be posted at: http://www.airquality.utah.gov/Permits/Report_OPS_Public_Comment.htm

For those interested in receiving weekly e-mail notices on Title V permit actions sent out to public comment, notify Dave Beatty at dbeatty@utah.gov or Ron Reece at rreece@utah.gov (NOTE: This is for all Title V actions statewide and is not specific to Stericycle.)

What exactly is Stericycle incinerating?

Stericycle incinerates waste that, due to its nature, is effectively treated through a thermal combustion process. This includes potential infectious waste streams from several sources, such as hospital and research waste and materials confiscated through the customs processing at the Salt Lake International Airport.

For a detailed list of what it is permitted to be incinerated, see the website, click on the solid and hazardous waste permit. The list is on pages 3 and 4 of its permit.

Why do we accept other states hazardous medical 'waste'?

Under the Commerce Clause of the U.S. Constitution and Federal law, Utah cannot stop waste coming from another state for disposal if a similar waste is generated and disposed of here.

Why can't we make Stericycle change to autoclave technology if they don't HAVE TO burn the waste?

The State does not have the legal authority to dictate technology to an existing source unless Federal standards require it. Rules in recent years have significantly reduced emissions of hazardous air pollutants from medical waste incinerators.

How are Stericycle emissions limitations determined?

See the website, under the section label How Emission Limits Are Set.

What are Stericycle's actual annual emissions?

The annual emissions, along with the permit parameters, are on the website.

How do you know what is actually being emitted if you are not doing continuous monitoring?

EPA has determined through years of testing and monitoring hundreds of pollution sources that stack emissions can be accurately monitored through carefully chosen facility operating parameters. The specific measures are arrived at during detailed stack emission tests that must scientifically demonstrate sound correlations between emissions and operating parameters such as feed rate, temperatures, flow rates, voltages, fan speed, etc. Comprehensive operating condition monitoring is often superior to infrequent or unreliable physical analytical methods, especially when real time status is important.

In addition the limits in the permit which are verified through the periodic stack tests are set at conservative levels to protect public health. If the situation warrants it – faulty record keeping or inspection results or specific complaints from the public which indicate the system is not operating as intended - stack tests may be taken more frequently.

The permit includes these operating parameters to be monitored along with minimum measurement and recording frequencies:

Operating Parameters	Data Measurement	Data Recording
Maximum charge rate, lbs/hr (3 HRA)	Continuous	Once per hour
Minimum secondary chamber temperature, F (3 HRA)	Continuous	Once per minute
Maximum reactor inlet temperature F (3 HRA)	Continuous	Once per minute
Minimum carbon injection lbs/hr (3 HRA)	Hourly	Once per hour
Minimum scrubber liquor flow rate, lbs/hr (3 HRA)	Continuous	Once per minute
Minimum scrubber liquor pH (3 HRA)	Continuous	Once per minute

During regular inspections, DEQ verifies that continuous data measurement is occurring where required. Knowing what is being fed into the incinerator, and looking at the results from continuous and hourly monitoring, DEQ has a good idea whether or not the actual emissions reported by the facility are, in fact, actual emissions. DEQ also checks that equipment is calibrated and accurate. Periodic stack tests are conducted every three to five years to determine if emissions are below permit limits and whether or not the system is operating as intended. The operating parameters recorded during a test become the required continuous operating parameters for the facility to ensure system performance does not deteriorate over time.

When can the DAQ conduct a current study on what is actually being emitted?

In addition to regular inspections, DAQ participated in a stack test at Stericycle in October. Air monitoring devices were used to quantify data. The purpose of the stake test is to demonstrate compliance with the emission & opacity limits found in Permit Condition II.B.4.c

Results will be made available to the public on the website, once DAQ has completed its analysis. DAQ tests the emissions from the Stericycle stack every 3 to 5 years

Who is doing the monitoring? How do we check it and analyze it? What will be done so that Stericycle does NOT regulate itself?

Stericycle does not regulate itself. The permit sets the monitoring parameters Stericycle is to follow. DAQ checks and verifies this information. A DAQ staff member was present during the recent stack testing.

The burden of demonstrating compliance is the responsibility of a business; they are required through permit monitoring, recordkeeping and reporting to prove to the State that they are in compliance. Rigorous federal and state test protocols must be adhered to and documented. DEQ regularly observes monitoring and quality assurance verification by third parties. The agency also audits monitoring and test documents. There are signs an environmental inspector watches for to know if something is not right. Also, when DAQ receives a complaint from a neighbor, staff members listen for those signs and then go and check things out.

What is an emergency bypass?

The incinerator is made up of two basic processes:

1. Waste material is destroyed by heat in the primary and secondary combustion chambers. This process leaves a gaseous stream which includes a small amount of ash particles.

2. Add on pollution control equipment cleans and cools this stream as it exits the secondary combustion chambers.

An "emergency bypass" occurs when the pollution control equipment (#2) is bypassed while there is waste still in the incinerator. The event triggers a cutoff so that additional waste is not fed to the incinerator until operations return to normal. Even during an emergency bypass event, the primary emission control (#1) remains in operation.

The bypass stack may also be used for short periods of time during the intentional start-up and shut-down of the incineration process. These events are planned and the process is controlled in order to heat up or cool down the incinerator without waste in the combustion chamber. The charging of waste without the pollution control equipment in place (when the bypass stack is open) is not allowed. Natural gas is used to bring the incineration chamber up to operating temperature prior to loading waste for incineration.

How can DAQ make claims that the emissions pose no serious threat when you do not monitor the exact emissions from bypasses and there is no constant monitoring of the emissions of concern?

The short answer is, because of the short term nature of bypass events and the low overall emissions rates from the incineration process.

The statement is based on emission and engineering calculations. The calculations also considered what emission rates would be if pollution control devices were removed. Our calculations are verified by periodic stack testing and the continuous monitoring of operating parameters.

The following is an example of the calculations used:

An incinerator with a secondary combustion chamber and no additional pollution control equipment has an emission rate of 16 lbs/hour for particulate. When the pollution control equipment is added, the resulting emissions rate is 0.5 lbs/hour. The control device is capturing 97% of the total emissions, achieving a 97% control efficiency.

With the pollution control equipment and under normal operation, the emission rate remains at 0.5 lbs/hour. This can be verified by monitoring operating conditions and by performing periodic stack sampling.

During instances when the pollution control equipment is bypassed, the emissions rate returns to the uncontrolled rate of 16 lbs per hour. The total bypass emissions can be calculated by multiplying the uncontrolled rate by the duration of the bypass event.

In this example, a two hour bypass would be calculated as follows:

16 lbs/hour uncontrolled emission rate X 2 hours = 32 lbs of bypass emissions.

Dioxin and several other pollutants are reported as negligible or N/A during an emergency bypass because their levels are extremely low.

What is monitored during a 'start-up' and 'shut-down' of the incinerator?

The shut down process begins only when there is no waste remaining the incineration chamber.

All operating conditions are monitored during shut down and start-up. Before any waste is introduced into the incineration chamber, the information is reviewed to ensure the incinerator is operating with the permitted specifications.

Are emergency bypasses reported?

Emergency bypasses are tracked and reported. All parameters are monitored during the bypass. Bypass events longer than two hours must be reported immediately to the Department of Environmental Quality. In addition, Stericycle is required to document and report all break-down events on a semiannual basis.
The cause and the steps taken to correct the problem are recorded and reported.

From 1/17/06 to 7/16/06 there were 8 events recorded. The shortest was 1 minute 54 seconds and the longest was 1 hour and 53 minutes resulting from an area-wide power outage. The combined duration of all emergency bypasses was 3 hours and 48 minutes.

Could you make Stericycle put an alarm on the facility when emitting during an emergency bypass while my kids are playing outside for the immediate short term?

DAQ can not, it is beyond our authority. Stericycle could be contacted directly for such an action. Based on the emission rates it appears to be an unnecessary addition to the process.

What about requiring a mandatory backup generator in the short-term until all Stericycle's issues are solved?

Stericycle has recently talked to DAQ about voluntarily adding a back-up generator. We are awaiting the Notice of Intent (permit application) to start our approval process.

Why does the Stericycle Satellite photo show black soot all around and now – as of the meeting – it appears to be somewhat clean? And they told me this was 'rust'

Satellite photography does not come without challenges to accurately interpret features. Clouds, steam plumes, and other elements may create shadows on a picture taken on a certain day that would not appear on another. Comparing pictures from different providers, or even taken on different occasions, may reveal a more accurate conclusion.